

**CLAIMS**

1. A device for forming injection moulded plastic articles, comprising a partible mould (5, 7) having an inner mould tool (5) and two outer mould tools (7), the outer mould tools (7) each having a central axis (C), the device further comprising a rotatable hub (4), the inner mould tool (5) being supported by the hub (4), which is arranged to move the inner mould tool (5) in an essentially circular movement into and out of a mould cavity enclosed by the outer mould tools (7), and means (9) for opening and closing the outer mould tools (7) around the inner mould tool (5), characterised in that the means (9) for opening and closing the outer mould tools (7) are arranged to move the outer mould tools (7) in a first direction (R) which is radial in relation to the hub (4) and a second direction (P) which is perpendicular to the first direction (R) and directed in the plane of the circular movement of the inner mould tool (5), moving the outer mould tools (7) so that their central axes (C) coincide throughout the movement.

2. A device as claimed in claim 1, wherein the means (9) for opening and closing the outer mould tools (7) are arranged to move the outer mould tools (7) in the first and second directions (R, P) at least partly simultaneously.

3. A device as claimed in claim 2, wherein the means (9) for opening and closing the outer mould tools (7) are arranged to move the outer mould tools (7) along circular arcs.

4. A device as claimed in any one of claims 1-3, wherein the means for opening and closing the outer mould tools (7) comprise pivotable levers (9), each lever (9) being articulately attached at one end (10) to an outer mould tool (7) and at the other end (13) to a mounting part (14) of a support for the device.

5. A device as claimed in claim 4, wherein the position of the mounting part (14) is fixed.

6. A device as claimed in claim 4 or 5, wherein the pivoting movement of the pivotable levers (9) is driven  
5 by belt drive means (17).

7. A device as claimed in any one of the preceding claims, wherein the means (9) for opening and closing the outer mould tools (7) comprise plane guide means (15) for guiding the outer mould tools (7) such that they are  
10 aligned when closed.

8. A device as claimed in claim 7, wherein the plane guide means comprise bars (15) on which holders (8) holding the outer mould tools (7) are guided in the second direction (P).

15 9. A device as claimed in claim 7 or 8, wherein the plane guide means (15) are movable in relation to the mounting part (14).

10. A device as claimed in any one of claims 7-9, wherein the belt drive means (17) are parallel with the  
20 plane guide means (15).

11. A device as claimed in claim 7, wherein the plane guide means (15) comprise pairs of parallel pivotable levers (9), each lever (9) being articulately attached at one end (10) to an outer mould tool (7) and  
25 at the other end (13) to a mounting part (14) of a support for the device.

12. A device as claimed in any one of claims 7-11, further comprising radial guide means (24) for guiding the outer mould tools (7) in the first direction (R).

30 13. A device as claimed in claim 12, wherein the radial guide means (24) are arranged to guide the plane guide means (15) in the first direction (R) and thereby guide the outer mould tools (7) in the first direction (R).

35 14. A device as claimed in claim 13, wherein the radial guide means comprise bars (24) on which the plane guide means (15) are guided.

15. A device as claimed in any one of the preceding claims, further comprising supply means (23) for supplying a plastic material to be injected, the supply means (23) being movable in the first direction (R) with the  
5 outer mould tools (7).

16. A device as claimed in claim 15, further comprising a pressure system (25) for pressurizing the injected plastic material, the pressure system (25) additionally being arranged as an auxiliary means for  
10 closing the outer mould tools (7).

17. A device as claimed in claim 15 or 16, wherein the radial guide means (24) additionally are arranged to guide the supply means (23).

18. A device as claimed in any one of the preceding  
15 claims, further comprising means for disengaging the outer mould tools (7) from a frame of the device.

19. A method of opening and closing a partible mould in an injection moulding device, the mould comprising an inner mould tool (5) and two outer mould tools (7), each  
20 outer mould tool (7) having a central axis (C), the device further comprising a rotatable hub (4), the inner mould tool (5) being supported by the hub (4), characterised in that the outer mould tools (7) are moved in a first direction (R) which is radial in  
25 relation to the hub (4) and a second direction (P) which is perpendicular to the first direction (R) and directed in the plane of the circular movement of the inner mould tool (5) and that the outer mould tools (7) are moved so that their central axes (C) coincide throughout the  
30 movement.

20. A method as claimed in claim 19, wherein the outer mould tools (7) are moved in the first and second directions (R, P) at least partly simultaneously.

21. A method as claimed in claim 20, wherein the  
35 outer mould tools (7) are moved along circular arcs.

22. A method as claimed in any one of claims 19-21, wherein the outer mould tools (7) are guided on plane

guide means (15) in the second direction (P) such that they are aligned when closed

23. A method as claimed in claim 22, wherein the plane guide means (15) are guided on radial guide means 5 (24) in the first direction (R), whereby the outer mould tools (7) are guided in the first direction (R).

24. A method as claimed in claim 23, wherein supply means (23) for supplying a plastic material to be injected into the partible mould are moved in the first 10 direction (R) with the outer mould tools (7).

25. A method as claimed in any one of claims 19-24, wherein the outer mould tools (7) are disengaged from a frame of the injection moulding device during injection of the plastic material.